UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 900
Seattle, WA 98101-3140

OFFICE OF
ENVIRONMENTAL CLEANUP

January 4, 2010

Nancy Stellmach
Northwest Region DEQ
Water Quality Permit Coordinator
2020 SW 4th Avenue, Suite 400
Portland, OR 97201-4987

RE: Proposed Renewal of NPDES Permit for Evraz Oregon Steel

Dear Ms. Stellmach:

The Environmental Protection Agency Office of Environmental Cleanup Program is concerned with all sources of contamination into the lower Willamette River, including discharges of wastewater, since Portland Harbor has been listed as a Superfund Site in December 2000. EPA Cleanup Program has reviewed the NPDES Permit Fact Sheet/Permit Evaluation Report, Prepared by DEQ November 23, 2009, and Draft NPDES Waste Discharge Permit #101007, Prepared by DEQ File #64905, and provides the attached comments.

As a general overview our impression of the permit is that it lacks conditions that will facilitate management of the processes, and/or provide incentives for the reduction and/or recycling of process water with the objective of reducing discharge volumes. The information provided does not support or identify why a discharge of the identified rate is needed for the process at the EOSM facility.

If you have any questions or concerns regarding these comments, please feel free to contact me at (206) 553-6705 or by email at koch.kristine@epa.gov.

Sincerely,

Kristine Koch
Remedial Project Manager

Review Comments on NPDES Permit Fact Sheet/Permit Evaluation Report Prepared by Oregon Department of Environmental Quality November 23, 2009

Submitted December 31, 2009

The following provides EPA's review comments on the following documents:

- "NPDES Permit Fact Sheet/Permit Evaluation Report" prepared by Oregon Department of Environmental Quality (DEQ) November 23, 2009, 33 pages.

The purpose of the review was to provide input and comment on storm water and wastewater discharges. The review has slight bias towards managing or reducing the potential recontamination of sediments in the Portland Harbor Superfund Cleanup Site. These comments address the Fact Sheet/Permit Evaluation Report (FS/PER) for the Evraz Oregon Steel Mills (EOSM) site.

General Comments FS/PER

1. The FS/PER describes that the primary changes to the draft permit are related to toxic monitoring requirements and semi-annual monitoring of priority metals.

2. The FS/PER inconsistently refers to the site as Evraz Oregon Steel, Oregon Steel Mills (OSM) and EOSM. Please reference the site consistently throughout the document.

3. The Draft Permit should be reviewed for presentation of units and should follow a consistent approach such as English (Metric).

Specific Comments FS/PER

1. **Page 3, page 4, and page 5.** Figures 1, 2 and 3 should have titles, show the locations of Outfalls #1 and #2, and show the storm water and wastewater catchment areas to each. The outfall destination of each of the plant process areas should be shown (i.e. which processes go where). The storm water catchments are needed to consider which storm water from what source and how much could be incidentally added to the process wastewater.

2. **Pages 5-7.** Locations of the Scrap Yard, and Vehicle Maintenance & Ancillary Shop, and all of the activities associated with the site processes and potential wastewater source listed on pages 5-7 should be shown on Figure 2.

3. **Pages 5-7.** Locations of Water Treatment Facility and other potentially pollutant-producing areas that could come in contact with stormwater should be shown on Figure 2 (or Figure 3 to differentiate from process water sources).

4. **Page 9.** Section 3.1 Please use consistent format for units Metric or English. Most of the report uses English only units.

5. **Page 9.** Section 3.2 refers to "about 3 gpm" (or ~4,320 gpd) return flow from the solids separator at Outfall 002, however Figure 5 shows 1,000 gpd reject flows at Outfall 002. Please correct/resolve the inconsistency.

6. **Page 10.** Figure 5 is hard to interpret because of the inconsistent use of units which include: gpd, gph, MGD, mg/mo, M^3/min, L/min. Consistent units should be used. Also, tank and reservoir storage should be noted. The process water flow rates on Figure 5 could be summarized in a separate table, should indicate the possible volume/rate, and source of water that goes to treatment. The objective is to provide system data supporting the permit discharge volume, potential sources, and needed treatment flow rates, and most importantly, system processes/locations with potential opportunities for source control.

7. **Page 12.** Spiral Pipe Mill and Pipe Coating Mill references 0.37 MGD of wastewater but is not shown on Figure 5.

8. **Page 12, Section 3.3.2.** Non-contact Cooling Water Systems references use of Biocides and 12.5% sodium hypochlorite to control biological growth. Please provide the specific biocides and the quantity and fate of these flows – Outfall #001? Biocides and sodium hypochlorite have a high potential for impacting toxicity tests.

9. **Page 13, Paragraph #3.** This section describes that formerly higher rate *batch* discharges (2,500 to 3,500 gpm) have been reduced to a 550 gpm discharge rate. Does this lower rate correspond to a smaller volume of discharge, or is it a lower *continuous* discharge rate of the same volume? How does the smaller diameter (8-inch) outfall enhance dilution/mixing? Is it a diffuser? Where is it relative to the location of the 30-inch outfall? How have the changes in discharge rate and configuration improved dilution and loading rates if it is the same volume of discharge?

10. **Page 13, Paragraph #5.** As noted in the general comments, the draft permit does not cover storm water discharges from the facility and only includes incidental storm water that "is mixed with the wastewater discharged from outfall 001."

11. **Page 15, Paragraph #2.** Change reference from OSM to EOSM.

12. **Page 19, paragraph #1, paragraph #3 and Table 6 heading.** The draft permit references Outfall 004 several times previously as having been renamed as Outfall 002.

13. **Page 19, Paragraph #2**. Show the location of the internal monitoring point on Figure 5. What is the rationale for this location? Does exceeding these limits result in an action, process change, or treatment response? Also, the text should say "limits" instead of "limitations."

14. **Page 20.** Table 8 is unnecessary (only one entry) and the heading is confusing. Replace with a sentence: "*Based on the applicable EOSM production rate of 4,536,000 kg/day, 40 CFR Subpart G provides the technology-based effluent limitations presented in Table 9 [now 8] representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BCT).*"

15. **Page 21, Table 10.** What flow rate is used to calculate the "Oil & Grease" limit of 346 lbs/day? The existing NPDES permit effluent limit for "Oil & Grease" is 15 mg/L, daily maximum flow is 0.79 MGD yielding an "Oil & Grease" limit of 99 lbs/day (15 mg/L x 0.79 MGD x 8.34 conversion factor = 99 lbs/day).

16. **Page 21, Paragraph #3.** First sentence says the internal monitoring point is Outfall 002, which is inconsistent with page 19, paragraph #2.

17. **Page 22, 9.1.4 Total Dissolved Solids.** Specify that the total dissolved solids (TDS) effluent limit of 1136 mg/L is a monthly average. What is the ODEQ's basis for authorizing this TDS effluent limit in the 2004 NPDES permit?

18. **Page 23, Paragraph #3.** Change reference from OSM to EOSM.

19. **Page 25, Paragraph #3.** The reasonable potential analysis references Attachments B and C. These attachments would benefit from some additional discussion or explanation.

20. **Page 25, Paragraph #4.** EPA agrees with retaining the limits for chlorine. The reasonable potential analysis should consider the use of Biocides and sodium hypochlorite in the noncontact cooling water system.

21. **Page 25, Paragraph #5 Last sentence**. Change reference from Evraz to EOSM. What is the monitoring proposed to allow a more robust analysis of effluent arsenic (especially inorganic)? The proposed monitoring requirements in Table 13 include only total metals two times per year.

22. **Page 26, Paragraph #3.** Last sentence discusses "the existing visual monitor turbidity in the river on a weekly basis" needs to be re-worded and explained. Turbidity could be an indicator of potential constituents that are causing sediment recontamination.

23. **Page 28, Paragraph #1.** The emergency and storm event conditions that would allow higher discharge rates should be defined in this fact sheet and be consistent with the draft permit. The way it is worded, storm events (without any limit, low, or high) would allow discharge without any consideration of how the storm flow would change or influence the amount of water that is in the system and how it affects the system's capacity. In other words, as written the EOSM facility could discharge during a storm regardless of the influence on the "incidental" storm to water quantity in the system. Further, it would reduce the incentive to remove processes/industrial activity from storm water contact and reduce the amount of incidental storm water in process water. By adding (or not limiting) storm water to process water, the volume of discharge is increased which would increase the loading of constituents from process water sources.

24. **Page 28, 11.4.1 Monitoring Requirements.** The monitoring requirements for Outfall 002 and the internal monitoring point are not clearly presented. Tables 13 and 14 present monitoring requirements for Outfall 001 only. The 2004 permit monitoring requirements are referenced.

25. **Attachment B.** The Aquatic Life Reasonable Potential Analysis is based on one sample for five of the eight parameters of concern. The Attachment B table would benefit from additional documentation regarding the basis of the data used in the analysis and the assumptions implicit in the analysis. For example, the "High Conc." column says "See IMD" but no reference is provided. The "Coef. of Variance" column uses 0.60 for most of the parameters. This is likely a default value for small sample sizes but should be documented as such. Parameters should be identified as Total Recoverable or Dissolved. Significant figures are inconsistent for concentration values presented.

26. **Attachment C.** The Human Health Reasonable Potential Analysis is based on one sample for four of the five parameters of concern. See comments on Attachment B (above) regarding IMD, CVs and significant figures. A footnote defining "*" should be provided.

Review Comments on Draft NPDES Waste Discharge Permit #101007 Prepared by Oregon Department of Environmental Quality File #64905

Submitted December 31, 2009

The following provides EPA's review comments on the following document:

- "Public Notice Draft NPDES Waste Discharge Permit #101007" **(WDP**) prepared by Oregon Department of Environmental Quality (DEQ), 23 pages.

The purpose of the review is to provide input and comment on storm water and wastewater discharges. The review has slight bias towards managing or reducing the potential recontamination of sediments in the Portland Harbor Superfund Cleanup Site. These comments address the Fact Sheet/Permit Evaluation Report (FS/PER) and Draft WDP for Evraz Oregon Steel Mills (EOSM) site. Separate comment documents are provided for each document. The specific comments below are for the Draft Waste Discharge Permit.

General Comments

4. The WDP addresses process wastewater, contact cooling water, non-contact cooling water, incidental storm water, and ground water seepage/dewatering. The WDP does not address storm water treatment design, O&M, or monitoring which is included under the Evraz Oregon Steel General Industrial Permit (#1200-Z).

5. Schedule F General Conditions (pp. 14-23) were considered standard DEQ boilerplate and were generally reviewed. However, specific comments are not provided because the general conditions are broadly applicable to all DEQ NPDES permits and they are not specific to the EOSM permit. Schedule F is superseded by the conditions presented in Schedules A through E.

Specific Comments

27. **Page 3, Schedule A, #1. Outfall 001: Wastewater Discharge to Willamette River.** The "*" footnote indicates that a higher flow rate is authorized during a certain storm event (greater than 1.1 inches over a 6-hour period) via an existing 24-inch pipe. What is the location of the rain gage that may be used for this determination? What is the "higher flow rate" allowed and for what duration? The FS/PER describes a 30-inch pipe near the outfall. Is this the same outfall? What is the basis for selecting this particular storm event and what is the expected additional discharge? To facilitate management of the discharge, the permit conditions should be structured to allow identification of the relative contribution of incidental storm water to the process water system in this event. The allowable stormwater discharges have an influence on loading that could affect sediment recontamination.

28. **Page 3, Schedule A, #3. Outfall 002: Intake Water Solids Separator Discharge to the Willamette River.** What is the basis for determining a "visually discernible plume?" Is there a standard observation point (boat or shore)? Perception of a plume will vary from person to person, by weather (cloud cover), and time of day conditions.

29. **Page 6, d) Outfall 002: Intake Water Solids Separator Discharge to Willamette River.** The permittee should provide information on how the edge of the mixing zone will be determined in the field and provide a protocol for visual assessment of the turbidity plume.

30. **Page 7, Schedule B, Note #1.** The permittee will have considerable control over process water discharge timing and frequency. While it is not possible to sample when there is no discharge, the sampling frequency should be required "for each discharge day up to twice weekly" for when there are two or more discharges in the week. The permit could also consider volume-triggered sampling to more clearly define when one "event" ends and the next one begins. This would prevent manipulation of the process water intake, discharge, and storage process to minimize sampling frequency.

31. **Page 7, Schedule B, Note #2.** The maximum allowable interval for repairing/replacing an inoperable continuous recording device should be specified. The discharges are reasonable within their control, so there should be no more than one event missed. A stand-by sampler could also be used to prevent missed events.

32. **Page 7, Schedule B, Note #3.** The minimum/maximum compositing interval should be specified as a time or flow interval (e.g., minimum of six sample aliquots collected over 4-hour intervals maximum).

33. **Page 7, Schedule B, Note #5.** The sampling interval for cyanide should be specified for preparing the 24-hour composite sample (e.g., minimum of four discrete samples collected at 6-hour intervals).

34. **Page 7, Schedule B, Note #6.** An acceptable method for compositing the four discrete volatile organic grab samples consisting of 100 mL vials should be specified. We are not familiar with any approved method that preserves the sample integrity. Otherwise, the permit should specify laboratory analysis of the discrete samples.

35. **Page 10, Schedule D, #1.c.(3): Acute Toxicity Testing Organisms and Protocols.** The specifics related to the composite sample should be provided (e.g., 24-hour composite with minimum of six aliquots at 4-hour intervals maximum) .

36. **Page 10, Schedule D, #1.c.(4): Acute Toxicity Testing Organisms and Protocols**. Please identify the source of the dilution waters used for the WET tests? EPA -821-R-02-012 allows use of either synthetic (laboratory) or receiving water as dilution waters and recognizes the importance of selection, preparation, and handling of dilution water.

37. **Page 10, Schedule D, #1.c.(5): Acute Toxicity Testing Organisms and Protocols.** The basis for the acute WET toxicity threshold should be provided (e.g., dilution at the edge of ZID is 18, therefore 5.5% or 1/18 is the allowable acute toxicity threshold).

38. **Page 11, Schedule D, #1.d.(4): Chronic Toxicity Testing Organisms and Protocols.** Same comment as above. The specifics related to the 24-hour composite sample should be provided (e.g., 24-hour composite with minimum of six aliquots at 4-hour intervals maximum).

39. **Page 11, Schedule D, #1.d.(4): Chronic Toxicity Testing Organisms and Protocols.** Same comment as above. What will be the source of the dilution waters used for the WET tests?

40. **Page 11, Schedule D, #1.d.(5): Chronic Toxicity Testing Organisms and Protocols**. The basis for the allowable chronic WET toxicity should be provided. Since the mixing zone dilution is 141, the chronic toxicity threshold is 1/141 or 0.7%

41. **Page 12, Schedule D, #1.e.(4): Chronic Toxicity Testing Organisms and Protocols.** Same comment as above. What will be the source of the dilution waters used for the WET tests?

42. **Page 12, Schedule D, #1.g.(2): Evaluation of Causes and Exceedances.** The permit simply requires re-testing within two weeks and subsequent notification for any WET test indicating toxicity. The permit should consider Toxicity Identification/Reduction Evaluation plan requirements to ensure timely response to repeated toxicity events and to facilitate addressing transient toxicity conditions.

43. **Page 13, Schedule D, #5: Flow Measurements.** The specified maximum deviation of $\pm$5% from the true discharge rate may not be reasonably attainable. Suggest using $\pm$10 as is typical of other DEQ permits.